CLAIMS:

- A polarizer device of Glan-Thompson type comprising first and second prisms made of a birefringent material having certain dispersion profiles n_o(λ) and n_e(λ) for, respectively ordinary and extraordinary polarization axis and being coupled to each other by a binding material layer, wherein said binding material has a dispersion profile, n_g(λ), matching said dispersion profiles n_o(λ) and n_e(λ) so as to provide an effect of total internal reflection within a spectral range including short wavelength of about 190nm.
 - 2. The device of Claim 1, wherein said prisms made of α -BBO crystals.
- 10 3. The device of any of the preceding Claims, wherein said first and second prisms have a cut angle θ ' of about 31° .
 - 4. The device of any of the preceding Claims, wherein said binding material is RTV silicone.
- 5. The device of any of the preceding Claims, wherein said binding material is a two-15 part material.
 - 6. The device of any of the preceding Claims, wherein said binding material has controlled volatility.
 - 7. The device of any of the preceding Claims, wherein said binding material has low viscosity.
- 20 **8.** The device of any of the preceding Claims, wherein said binding material is CV15-2500 optical glue, commercially available from NuSil Technology, USA.
 - 9. The device of any of the preceding Claims, wherein said binding material layer has a thickness of a few microns.
- 10. The device of any of the preceding Claims, wherein said binding material layer25 includes a mixture of an optical glue material with small beads of solid transparent material.
 - 11. The device of Claim 10, wherein said beads are uniformly distributed within the glue material with a surface area concentration of the beads substantially not exceeding 10⁻⁶ cm⁻².

- 12. The device of any of the preceding Claims, wherein each of the prisms' facets defining side facets of the device for inputting and outputting light has a circular geometry.
- 13. The device of any of the preceding Claims, wherein each of the prisms' facets defining side facets of the device for inputting and outputting light is a polygon of more than four angles.
- 14. The device of any of the preceding Claims, wherein each of the prisms' facets defining side facets of the device for inputting and outputting light is an eight-angle polygon.
- 15. A polarizer device of Glan-Thompson type comprising first and second prisms made of a birefringent material having certain dispersion profiles n₀(λ) and n_e(λ) for, respectively ordinary and extraordinary polarization axis and being coupled to each other by a binding material layer including a mixture of a binding material and small beads of a solid transparent material, wherein said binding material has a dispersion profile, n_g(λ), matching said dispersion profiles n₀(λ) and n_e(λ) so as to provide an effect of total internal reflection within a spectral range including short wavelength of about 190nm.
 - 16. A polarizer device of Glan-Thompson type comprising first and second prisms made of a birefringent material having certain dispersion profiles n_o(λ) and n_e(λ) for, respectively ordinary and extraordinary polarization axis and being coupled to each other by a binding material layer including a mixture of a binding material and small beads of a solid transparent material, wherein said binding material has a dispersion profile, n_g(λ), matching said dispersion profiles n_o(λ) and n_e(λ) so as to provide an effect of total internal reflection within a spectral range including short wavelength of about 190nm and wherein the beads being substantially uniformly distributed within the binding material layer with a surface area concentration, C_s, substantially not exceeding 10⁻⁶cm⁻².
- 25 17. A polarizer device comprising first and second prisms coupled to each other by their tilted surfaces; and a binding material layer between said tilted surfaces of the prisms, said layer including a mixture of a binding transparent material and small beads of a solid transparent material, the binding material layer thereby having a substantially uniform thickness of about 5-10 microns. A polarizer device having opposite side facets serving for,

respectively, inputting and outputting light, wherein each of said side facets is either a circle or a polygon of more than four angles.

- 18. A method of manufacturing a polarizer device of Glan-Thompson type comprising providing first and second prisms made of a selected bire-fringent material having certain dispersion profiles n_o(λ) and n_e(λ) for, respectively ordinary and extraordinary polarization axis, selecting a binding material having a dispersion profile, n_g(λ), matching said dispersion profiles n_o(λ) and n_e(λ) so as to provide an effect of total internal reflection within a spectral range including short wavelength of about 190nm and attaching the tilted surfaces of the prisms to each other by a layer of said binding material.
- 10 19. A method of manufacturing a polarizer device of Glan-Thompson type comprising providing first and second prisms coupled to each other at their tilted surfaces by a binding material layer, which includes a mixture of a binding transparent material and small beads of a solid transparent material, the binding material layer thereby having a substantially uniform thickness of about 5-10 microns.
- 15 **20.** A method of manufacturing a polarizer device of G lan-Thompson type comprising providing first and second prisms coupled to each other at their tilted surfaces by a binding material layer, which includes a mixture of a binding transparent material and small beads of a solid transparent material, the binding material layer thereby having a substantially uniform thickness of about 5-10 microns.
- 20 21. The method for manufacturing a polarizer device of Glan-Thompson type of any of the preceding method Claims comprising configuring opposite side facets serving for, respectively, inputting and outputting light, to be either a circle or a polygon of more than four angles, thereby minimizing a footprint of the polarizer device.